

## CLAIMS

What is claimed is:

1           1.     A positioning system comprising:  
2           a receiver configured to receive positioning signals;  
3           a processor configured to process the positioning signals in a real time  
4 manner to generate positioning data;  
5           user application code executed by the processor, said application code  
6 configured to access the positioning data;  
7           a firewall established between the processor and the user application  
8 code, said firewall configured to prevent the user application code from  
9 corrupting positioning data and enables the processor to process the  
10 positioning signals in real time without interference by the user application  
11 code.

1           2.     The positioning system as set forth in claim 1, further  
2 comprising an application programming interface (API), said API configured  
3 to access the positioning data as instructed by the user application code.

1           3.     The positioning system as set forth in claim 2, wherein the API  
2 comprises a plurality of objects.

1           4.     The positioning system as set forth in claim 1, wherein the  
2 processor executes a real time operating system (RTOS).

1           5.     The positioning system as set forth in claim 1, wherein the  
2     firewall comprises a virtual machine.

1           6.     The positioning system as set forth in claim 1 wherein the  
2     processor comprises positioning code executed by the processor and the  
3     firewall comprises setting the positioning code to a higher priority than the  
4     user application code.

1           7.     In a positioning system, a method for processing positioning  
2     signals comprising the steps of:  
3         receiving positioning signals;  
4         processing the positioning signals in a real time manner to generate  
5     positioning data;  
6         accessing the positioning data through a firewall that prevents an  
7     access from corrupting positioning data and interfering with the processing  
8     of the positioning signals;  
9         processing the positioning data to generate user application data.

1           8.     The method as set forth in claim 7, wherein the step of  
2     processing the positioning signals is performed using a real time operating  
3     system (RTOS).

1           9.     The method as set forth in claim 7, wherein the firewall  
2     comprises a virtual machine, said step of accessing comprising the steps of:  
3         issuing instructions to the virtual machine;  
4         said virtual machine receiving the issued instructions and  
5     performing the access in accordance with the issued instruction.

1           10.    The method as set forth in claim 7, wherein the firewall  
2 comprises the steps of processing the positioning signals at a higher priority  
3 than the accessing and processing the positioning data.

1           11.    A computer readable medium containing executable  
2 instructions which, when executed in a processing system, causes the system  
3 to perform steps for processing positioning information, comprising:  
4           receiving positioning signals;  
5           processing the positioning signals in a real time manner to generate  
6 positioning data;  
7           accessing the positioning data through a firewall that prevents an  
8 access from corrupting positioning data and interfering with the processing  
9 of the positioning signals; and  
10          processing the positioning data to generate user application data.

1           12.    The computer readable medium as set forth in claim 11,  
2 wherein the instructions further comprise a virtual machine, said step of  
3 accessing comprising the steps of:  
4           issuing instructions to the virtual machine; and  
5           said virtual machine receiving the issued instructions and  
6 performing the access in accordance with the issued instruction.

1           13.    The computer readable medium as set forth in claim 11,  
2 wherein the step of accessing comprises accessing the positioning data at a  
3 lower priority than processing the positioning signals.